SCHEDULE-B

Estimate for the work of deviation of existing 1)100mm dia DI water supply pipeline at Janaki ram layout, near HKGN Masjid Govindapura 2)150mm dia DI water supply pipeline at Shamapura main road 30 kg Govindapura, 3) 100mm dia dia DI water supply pipeline at veeranna palya near Kingston school, proposed for upcoming K-Ride (Railway) project at above location coming under HBR service station of AEE E21 sub division office.

Sl. No	Particulars	Unit	Qty
1	Dismantling of Flexible pavements and disposal of dismantled materials and stacking serviceable and unserviceable materials separately,by mechanical means bituminous course	m^3	151.42
2	Earth work excavation for pipeline trenches in all kinds of soils by mechanical means as per drawing and technical specifications, including setting out, construction of shoring, strutting, barricading, caution lights, bracing, using sight rails & bonding rods at every 100 mm wherever necessary as directed, removal of stumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work etc., and all other appurtenances complete in the following strata All kinds of soils. Depth upto 1.50m	m^3	452.30
3	Installation of steel product pipe by HDD method including preparing and setting up the plant and equipment, preparing new pipe work materials, installing new pipe work and commissioning system or making the system ready for ommissioning by HDD operation including all related civil and mechanical works like excavation, shoring / strutting etc. drilling, stringing, ramming and pulling back the new work on the design bore path alignment, proper disposal of drilling fluid and restoration of site after completion etc. for horizontal directional drilling technique suiting Indian conditions in all types of soil including the cost of sleeve / casing pipe etc. in all respects for	m^3	150.00
4	Providing and laying Ductile Iron pipes of class conforming to IS 8329:2000 with latest amendments, conveying to work site, rolling and lowering into trenches, laying true to line, level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations, cutting of pipes wherever necessary, jointing with DI specials (excluding cost of specials) and rubber gaskets, cleaning the socket and spigot end with soap solution, applying soft soap to the socket and spigot ends before insertion of rubber gaskets, jacking and fixing in perfect conditions etc. The cost to include soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS with all lead and lifts and cost of all jointing materials. (The contractor will make his own arrangements for water for testing. Earth work excavation in trenches to be measured and paid for seperately) Note: In sewerage projects for internal cement mortal lining (CML) of DI pipes, if High Alumina Cement (HAC) as recommended in Annexure B clause 16.3 of IS8329:2000 is considered in place of Slag or Sulphate Resistance Cement (SRC), the cost of pipes may be increased by 5-6% from the prices listed. K9 pipe		
4a	100mm dia DI pipe	m	400
4b	150mm dia DI pipe	m	150
5	Providing and fixing DI Resilient seated soft sealing SLUICE VALVE of variouis dia. with body bonnet of Ductile Iron (DI) conforming ti IS-1865 with the latest amendments and of grade GGG 40/50, shaft of stainless steel, wedge fully rubber lined with EDPM seals of NBR and the valves should be vacum tight and 100% leak proof with face to face dimensions as per IS 14846-2000 with the latest amendments only. The stem sealing should be with toroidal sealing rings (minimum 2 " O " rings). Body and bonnet should be coated with Electrostatically applied Epoxy Powder Coating with minimum coating thickness of 250 micron both inside and outside. The rate is inclusive of cost of valves, T.P set,		

	galvanized bolts & nuts and rubber insertions etc. but excluding earth work. For PN-10: (Note: TP set should be considered only for DI pipes estimate. For MS pipes estimates, TP sets cost of corresponding dia shall be deducted from the SR rates of valves and provision for corresponding dia MS flanges should be made in the estimate.) etc. complete		
5a	100mm dia Valve	No	6
5b	150mm dia Valve	No	3
6	Providing and fixing DI MJ specials such as branches and bends suitable for DI K7 and K9 pipes and CI LA class pipes, as per IS 13382 with latest amendments with complete accessories and fixing at site excluding earth work but including loading, unloading, freight charges etc complete for:		
6a	DI MJ specials - collar 100mm dia.	Each	20
6b	DI MJ specials - Bend 100 x 90 degree mm	Each	12
6c	DI MJ specials - Branch 100 x 100mm	Each	6
6d	DI MJ specials - collar 150mm dia	Each	10
6e	DI MJ specials - Bend 150 x 90 degree	Each	7
6f	DI MJ specials - Branch 150 x 150mm	Each	2
7	Providing, fabricating and fixing at site various diameter MS MJ ends with dummy plates (END CAPS) to suit CI / DI spigots end as per the sketch. The cost is inclusive of all materials, i.e, rubber 'O' rings, flanges, bolts and nuts, dummy plates, consumables, hire charges, tools and welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge. For CI / DI pipes of 100mm dia	Each	5
8	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications	m^3	471.75
9	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density	m^3	75.71
10	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications.Mix 1:3:6 Using 40 mm nominal size graded crushed coarse aggregates	m^3	50.47
11	Removal of Unserviceable Soil with Disposal upto a suitable distance as directed by the Engineer incharge of work	m^3	5.79

Executive Engineer

Water Supply & Sanitary division (East)-2,
BWSSB,HRBR 1st Block
Kalyan nagar,
Bangalore-560043